IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Abhay S. Kant et al.	§		
	§	Group Art Unit:	2863
Serial No.: 10/720,817	§		
	§	Examiner:	Lau, Tung S.
Filed: November 24, 2003	§		
	§		
For: METHOD AND APPARATUS FOR DETECTING RUB IN A TURBOMACHINE	§	Atty. Docket:	133918-1/ SWA GERD:0332

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

November 8, 2006
Date

Seanelle Dice

Dear Sir:

INTERVIEW SUMMARY
AND TRANSMITTAL OF EXHIBITS A, B, AND C
AND DECLARATIONS PURSUANT TO 37 C.F.R. § 1.131

In response to the Advisory Action mailed on September 18, 2006, the Applicants hereby submit the enclosed Exhibits A, B, and C and declarations pursuant to 37 C.F.R. § 1.131 ("Rule 131 Declarations") to swear behind Barkhoudarian, U.S. Patent Application Publication No. 2004/0060371. Specifically, the Rule 131 Declarations are signed by the inventors of record: Abhay Sudhakarrao Kant, Vivek Venugopal Badami, Joseph Robert Toth, Nicholas Giannakopoulos, Mark M. Dimond, and Jitendra Kumar. The Applicants note that the enclosed Exhibit C supplements the Exhibits A and B originally filed on June 19, 2006. In view of this supplemental evidence, the Applicants respectfully request allowance of the present application as discussed below.

INTERVIEW SUMMARY

On November 1, 2006, the Examiner and the Applicants' representative, Tait R. Swanson (Reg. No. 48,226), discussed the sufficiency of the evidence to swear behind the Barkhoudarian reference. Although the Applicants stress that the previously filed evidence is sufficient to remove the Barkhoudarian reference in accordance with 37 C.F.R. § 1.131, the Applicants agreed to file another set of Rule 131 Declarations with additional evidence to correlate the previous evidence to a turbomachine.

REMOVAL OF BARKHOUDARIAN PURSUANT TO 37 C.F.R. 1.131

In view of the earlier date of invention of the subject matter disclosed and claimed in the present application, Applicants have chosen to remove the Barkhoudarian pursuant to 37 C.F.R. § 1.131. Under Rule 131, the Applicants may overcome a prior art rejection by filing an appropriate declaration that establishes invention of the claimed subject matter by the Applicants prior to the effective date of the reference relied upon in the rejection. Prior invention may be shown by proving actual reduction to practice prior to the effective date of the reference.

Accordingly, Applicants submit the enclosed Rule 131 Declarations, signed by the inventors of record, to demonstrate that the invention disclosed and claimed in the present application was conceived and actually reduced to practice prior to the effective date of the Barkhoudarian reference.

The effective date of Barkhoudarian is September 30, 2002. In paragraph 3 of the attached Rule 131 Declarations, the inventors declare that the subject matter disclosed and claimed in the above-referenced application was conceived in the United States, a NAFTA country, or a WTO country at least *prior to* September 30, 2002. Applicants further submit that Exhibit A in its entirety, along with the corresponding Rule 131 Declarations, is sufficient to demonstrate conception of the claimed subject matter at least prior to

September 30, 2002. Specifically, this conception is evidenced by slides 1, 2, 5, 9, and 14 of a PowerPoint presentation relating to "Modified Algorithms based on feed back received from review meeting on July 19, 2002," as indicated by slide 1. *See* Rule 131 Declarations, paragraph 3; Exhibit A. These slides generally illustrate and describe systems and methods for monitoring operational parameters of a turbomachine (e.g., a turbine generator) on-site via various sensors, identifying anomalies in data received from sensors, and detecting possible rub events. *See id.* Slide 2 is labeled "High Differential Expansion along with High Vibration," and illustrates and describes monitoring bearing vibration, checking for abnormal amplitude or variation, and triggering an alarm if an anomaly is observed with the bearing vibration. *See id.* Slide 5 is labeled "High eccentricity following vibration excursion," and illustrates and describes monitoring or checking for abnormalities associated with vibration or eccentricity, and identifying a possible rub during shut down of a turbine generator (indicated by "TG" in the slide). *See id.* Slide 9 is labeled "Sudden large shell temperature ramp," and illustrates and describes monitoring parameters, identifying an abnormal change in steam and shell metal temperature, identifying an abnormal change in vibration, and identifying a possible rub event. *See id.* Slide 14 is labeled "Rub Anomaly Flow Down," and illustrates and describes various techniques for monitoring and identifying abnormalities to identify a possible rub event. *See id.* In view of the foregoing evidence, the Applicants stress that subject matter disclosed and claimed in the present application was conceived at least prior to the September 30, 2002, effective filing date of Barkhoudarian.

As indicated by paragraph 4 of the attached Rule 131 Declarations, the inventors declare that the subject matter disclosed and claimed in the above-referenced application was actually reduced to practice in the United States, a NAFTA country, or a WTO country at least *prior to* September 30, 2002. Applicants further submit that Exhibit B in its entirety, along with the corresponding Rule 131 Declarations, is sufficient to demonstrate actual reduction to practice of the claimed subject matter at least prior to September 30,

2002. This actual reduction to practice is evidenced by the Excel graph labeled "Desk Top validation results (9/17/02)," which records successful completion and testing of a prototype of the method and system set forth and claimed in the referenced application at least prior to September 30, 2002. *See* Rule 131 Declarations, paragraph 4; Exhibit B. Specifically, the Excel graph represents data collected while monitoring the operation of a turbomachine, and indicates anomalies that correspond to possible rub events in the turbomachine. *See id.* The Excel graph illustrates variation in speed relative to time and four different alarms indicative of a possible rub event. *See id.* In view of the foregoing evidence, the Applicants stress that subject matter disclosed and claimed in the present application was actually reduced to practice at least prior to the September 30, 2002, effective filing date of Barkhoudarian.

As indicated by paragraph 5 of the attached Rule 131 Declarations, the inventors declare that Exhibit C further evidences actual reduction to practice at least prior to September 30, 2002. Specifically, actual reduction to practice is further evidenced by the PowerPoint presentation relating to "Steam Turbine Remote Monitoring & Diagnostics Rub Detection CDE Application Design Review," which is dated December 18, 2002, and includes various data, graphs, diagrams, and information relating to conception and reduction to practice prior to September 30, 2002. *See* Rule 131 Declarations, paragraph 5; Exhibit C (emphasis added). Slide 3 is labeled "ST Rub CDE Design Review," and indicates that the Continuous Data Engine (CDE) is a real-time anomaly detection platform that resides on the On-Site Monitor (OSM) for Steam Turbines (ST). *See id.* Slide 19 is labeled "Validation results for DT and OSM testing with real field data," and tabulates testing of a steam turbine remote monitoring and diagnostic system on 7/9/2002, 6/26/2002, 6/13/2002, 5/8/2002, 7/13/2002, 6/8/2002, 6/24/2002, 5/31/2002, 11/9/2002, 9/17/2002, and 5/21/2002. *See id.* Slide 20 is labeled "OSM Validation Results of CDE algorithms with 'Real Rub Event' Data Overview," and illustrates successful testing of the remote monitoring & diagnostic system to identify rub events in a steam turbine on 5/21/2002,

6/24/2002, and 7/9/2002. *See id.* Slide 21 is labeled "OSM Validation of CDE algorithms with 'Real Rub Event' Data," and illustrates further successful testing of the remote monitoring & diagnostic system to identify rub events in a steam turbine on 6/8/2002 and 6/24/2002. *See id.* Slide 39 is labeled "On-Site Data Flow," and illustrates an On-Site Monitor (OSM) Data Flow Diagram related to a design review on November 13, 2000. *See id.* The diagram of slide 39 illustrates a web interface and a mail service for monitoring a turbine generator. *See id.* Slide 69 is labeled "DT Validation of CDE with ... unit data, 270T489," and illustrates further successful testing of the remote monitoring & diagnostic system to identify rub events in a steam turbine on 5/31/2002 and 9/17/2002. *See id.* In view of the foregoing supplemental evidence, the Applicants stress that subject matter disclosed and claimed in the present application was actually reduced to practice at least prior to the September 30, 2002, effective filing date of Barkhoudarian.

Accordingly, in view of the Applicants' earlier reduction to practice, the Applicants respectfully request that the Examiner remove Barkhoudarian from consideration and withdraw all outstanding rejections based on Barkhoudarian. Upon removal of Barkhoudarian, the Applicants stress that the pending claims are in condition for allowance.

Conclusion

If the Examiner wishes to resolve any issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: November 8, 2006

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